



KONICA MINOLTA

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LASER IMAGER

**DRYPRO MODEL 771**

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**DICOM 3.0 Conformance Statement**

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Ver. 1.03 2005. 02

**KONICA MINOLTA MEDICAL & GRAPHIC, INC.**

## DRYPRO MODEL 771

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### Revision History

Date	Version	Description
01/09/2003	Ver.1.00(First Release)	
01/10/2003	Ver.1.01	Changed the company name. Modified the support of extended character sets.
30/03/2004	Ver.1.02	Modified the input image restrictions.
23/02/2005	Ver.1.03	Added restrictions on the direction of stamps in the input image restrictions.

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## **0 INTRODUCTION**

This document describes the compatibility of LASER IMAGER DRYPRO MODEL 771 (Print Management Service Class) with DICOM3.0.

Note: The descriptions in this document may change without prior notice.

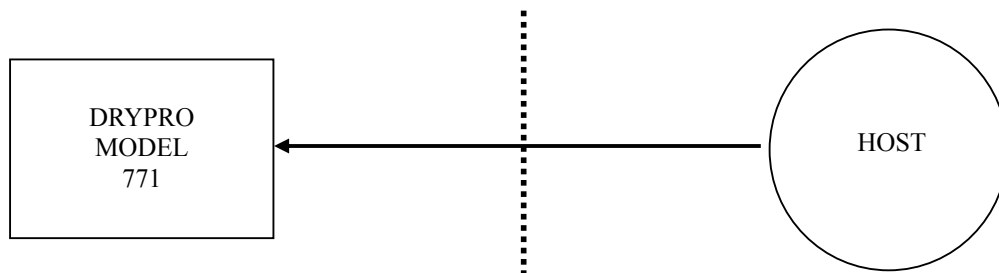
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## 1 IMPLEMENTATION MODEL

DRYPRO MODEL 771 (SCP) is a laser imager to hardcopy images according to print requests from the Host (SCU).

### 1.1 Application Data Flow Diagram



### 1.2 Functional Definitions of AE's

When the SCP receives Verification or Print Management Service from SCU, the SOP class defined by Verification or Print Management Service Class is used.

As for the operating method of SOP classes, the DIMSE service defined by each SOP class is used. DRYPRO MODEL 771 (SCP) processes image data and hardcopies images according to the individual attribute values that are designated by the Host (SCU).

### 1.3 Sequencing of Real World Activities

This model is not applicable with the Sequence of Real-World Activities.

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## **2 AE SPECIFICATION**

### **2.1 DRYPRO MODEL771 Specification**

DRYPRO MODEL 771 receives print request associations and operates as an application entity.  
DRYPRO MODEL 771 conforms as an SCP to the following SOP classes.

Table 1 Print Management Meta SOP Class

Meta SOP Class , SOP Class Name	Meta SOP Class , SOP Class UID
Verification SOP Class	1.2.840.10008.1.1
Basic Grayscale Print Management Meta SOP Class	1.2.840.10008.5.1.1.9
Presentation LUT SOP Class	1.2.840.10008.5.1.1.23

#### **2.1.1 Association Establishment Policies**

Hereinafter, conditions for establishing association will be described.

##### **2.1.1.1 General**

DRYPRO MODEL 771 utilizes DICOM Upper Layer Services to establish association with SCU.  
An association is made for each Verification and Basic Print Service Request.

##### **2.1.1.2 Number of Associations**

The number of associations that DRYPRO MODEL 771 can support at the same time is 16.

##### **2.1.1.3 Asynchronous Nature**

DRYPRO MODEL 771 supports asynchronous N-EVENT messages.  
However, these are transmitted as required.

##### **2.1.1.4 Implementation Identifying Information**

The implementation class UID for DRYPRO MODEL 771 is "1.2.392.200036.9107.403".

The implementation version for DRYPRO MODEL 771 is "KC\_DPRO2\_X.XXXXX".

\* X.XXXXX indicates the software version.

e.g. KC\_DPRO2\_1.00R00

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### **2.1.2 Association Initiation Policy**

DRYPRO MODEL 771 starts associations to publish asynchronous N-EVENT messages.

### **2.1.3 Association Acceptance Policy**

DRYPRO MODEL 771 establishes associations from the association establishment request from the Host (SCU).

#### **2.1.3.1 Real World Activities**

##### **2.1.3.1.1 Associated Real World Activity**

Image data and various parameters are sent to the imager with the command from the Host (SCU) in order to print image data on films.

Request for C-ECHO, Film Session, Film Box, or Image Box can be sent with the command from the Host (SCU).

##### **2.1.3.1.2 Proposed Presentation Contexts**

DRYPRO MODEL 771 can receive the presentation contexts listed in the following table.

Table 2 Proposed Presentation Contexts

Abstract syntax		
Name	UID	Role
Verification SOP Class	1.2.840.10008.1.1	SCP
Basic Grayscale Print Management Meta SOP Class	1.2.840.10008.5.1.1.9	SCP
Printer Management Class	1.2.840.10008.5.1.1.16	SCP
Presentation LUT SOP Class	1.2.840.10008.5.1.1.23	SCP

Extended negotiation can be conformed to as required.

The following transmission structure is valid against the individual SOP classes mentioned above.

Name	UID
Implicit VR Little Endian	1.2.840.10008.1.2

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### **2.1.4 SOP Class Compatibility**

#### **2.1.4.1 Verification SOP Class**

This model is applicable with Verification SOP Class.  
When this model receives a C-ECHO Request, it returns a C-ECHO Response.

#### **2.1.5 Basic Grayscale Print Management Meta SOP Class**

This model conforms to the Basic Grayscale Print Management Meta SOP Class.  
The following SOP classes are supported.

Table 3 Supported SOP Class and UID Value

SOP Class	UID
Basic Film Session SOP Class	1.2.840.10008.5.1.1.1
Basic Film Box SOP Class	1.2.840.10008.5.1.1.2
Basic Grayscale Image Box SOP Class	1.2.840.10008.5.1.1.4
Printer SOP Class	1.2.840.10008.5.1.1.16

#### **2.1.5.1 Basic Film Session SOP Class**

Table 4 Film Session

Tag	Name of item	VR	VM	Value
(2000,0010)	Number of Copies	IS	1	1~99
(2000,0020)	Print Priority	CS	1	LOW, HIGH, MED
(2000,0030)	Medium Type	CS	1	CLEAR FILM, BLUE FILM, DR Clear Base, DR Blue Base
(2000,0040)	Film Destination	CS	1	PROCESSOR,
(2000,0060)	Memory Allocation	LO	1	Set the required memory contents. Indicate in KB.
(2010,015E)	Illumination	US	1	
(2010,0160)	Reflected Ambient Light	US	1	

Tags other than those listed above will not be checked.  
Furthermore, this model can conform to non-conforming header data as required.



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### 2.1.5.2 Basic Film Box SOP Class

Table 5 Film Box

Tag	Name of item	VR	VM	Value
(2010,0010)	Image Display Format	ST	1	STANDARD\C,R = CxR Format ROW\R1,R2 = Row Format
(2010,0030)	Annotation Display Format ID	CS	1	P1 : PORTRAIT L1 : LANDSCAPE TM : TIME CC : Copy Count ID : Modality ID MS : Message
(2010,0040)	Film Orientation	CS	1	PORTRAIT LANDSCAPE
(2010,0050)	Film Size ID	CS	1	11INX14IN 14INX14IN 14INX17IN
(2010,0060)	Magnification Type	CS	1	NONE : No interpolation BILINEAR : Bilinear interpolation REPLICATE : Replicate interpolation CUBIC : Cubic B-Spline interpolation
(2010,0080)	Smoothing Type	CS	1	1~7 Only for (2010,0060) = CUBIC
(2010,0100)	Border Density	CS	1	BLACK = Black Border WHITE = Clear Border
(2010,0120)	Min Density	US	1	0~100
(2010,0130)	Max Density	US	1	100~350
(2010,0140)	Trim	US	1	YES : With trim frame NO : Without trim frame
(2010,0150)	Configuration Information	ST	1	Imager LUT indication is as shown below. KC_LUT=1 ~ KC_LUT=7

Tags other than those listed above will not be checked.

Furthermore, this model can conform to non-conforming header data as required.

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### 2.1.5.3 Basic Grayscale Image Box SOP Class

Table 6 Image Box

Tag	Name of item	VR	VM	Value
(0028,0002)	Samples per Pixel	US	1	
(0028,0004)	Photometric Interpretation	CS	1	MONOCHROME1 : Minimum VO1 pixel = White MONOCHROME2 : Minimum VO1 pixel = Black
(0028,0010)	Rows	US	1	Pixels in imager Y orientation
(0028,0011)	Columns	US	1	Pixels in imager X orientation
(0028,0034)	Pixel Aspect Ratio	IS	2	
(0028,0100)	Bits Allocated	US	1	Bits allocated in pixel. Non-used bits are included. 0008 = 8 (8bits) 0010 = 16 (12bits) Those other than the above result in an error.
(0028,0101)	Bits Stored	US	1	Bits in 1 pixel 0008 = 8bits 000C = 12bits
(0028,0102)	High Bit	US	1	Pixel data MSB(Most Significant Bit). 0007 = 7 (Bits Stored = 8) 000B = 11 (Bits Stored = 12)
(0028,0103)	Pixel Representation	US	1	Pixel data representation 0x0000 = Integer with no marks
(2020,0010)	Image Position	US	1	Image position that structures a page.
(2020,0020)	Polarity	CS	1	NORMAL REVERSE
(2020,0030)	Requested Image Size	CS	1	
(2040,0040)	Requested Decimate/Crop Behavior	CS	1	DECIMATE CROP FAIL
(7fe0,0010)	Pixel Data	OW / OB	1	

Tags other than those listed above will not be checked.

Furthermore, this model can conform to non-conforming header data as required.

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The request image dimensions conform only to 1 on 1 format.  
The maximum valid size that can be specified for each film is listed in Table 7.  
However, printing may fail depending on the image aspect.

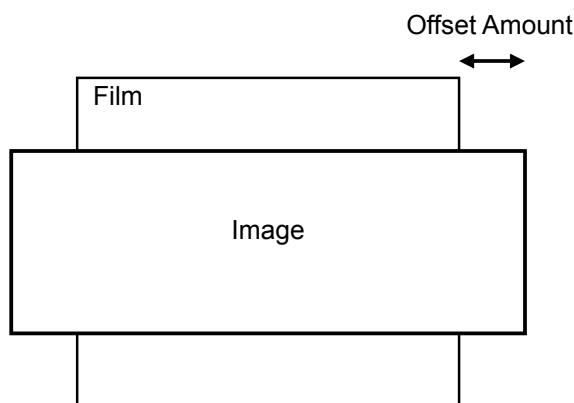
Table 7 Request Image Dimension

Film Size	Film Orientation	Requested Image Size (mm)
14x17	Portrait	342 (354)
	Landscape	418 (426)
14x14	Portrait	342 (354)
	Landscape	
11x14	Portrait	267 (275)
	Landscape	342 (354)

The parenthesized value is in case of the CR mode.

Following are the setups in case the request image dimension exceeds the values in the table above.

- When DRYPRO771 is set to CROP



Some part of the image cannot be printed since the image is recorded based on the center of the film. In this case, the offset amount is printed on the film.

- When DRYPRO771 is set to other than CROP



The image is recorded on the film using the scale factor specified in the imager. In this case, the ratio to the request image dimension is printed on the film.

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### **2.1.5.4 Printer SOP Class**

Table 8 Printer

Tag	Name of item	VR	VM	Value
(0008,0070)	Manufacture	LO	1	KONICA MINOLTA
(0008,1090)	Manufacture's Model Name	LO	1	DRYPRO771
(0018,1000)	Device Serial Number	LO	1	Serial Number of the DRYPRO
(0018,1020)	Hardcopy Device Software Version	LO	1	Software Version of the DRYPRO
(2110,0010)	Printer Status	CS	1	NORMAL WARNING FAILURE
(2110,0020)	Printer Status Info	CS	1	See Appendix C
(2110,0030)	Printer Name	LO	1	DRYPRO771

**2.1.6 Presentation LUT SOP Class**

Table 8 Presentation LUT

Tag	Name of item	VR	VM	Value
(2050,0010)	Presentation LUT Sequence	SQ	1	
(0028,3002)	LUT Descriptor	US\US	3	
(0028,3003)	LUT Explanation	LO	1	
(0028,3006)	LUT Data	US or SS	1-n	
(2050,0020)	Presentation LUT Shape	CS	1	IDENTITY / LIN OD

### **3 COMMUNICATION PROFILES**

#### **3.1 Supported Communication Stacks**

It provides the TCP/IP network communication support defined by the DICOM3.0 PART8.

#### **3.2 TCP/IP Stack**

The TCP/IP stack is succeeded from the Windows2000 system environment.

##### **3.2.1 Physical Media Support**

This model supports the following physical media by standard.  
- 10 BaseT, 100BaseTX

## **4 EXTENSIONS/SPECIALIZATIONS/PRIVATIZATIONS**

The following attributes are reserved in the Basic Film Box SOP Class.

- (2011,0010) Konica Private Data Element
- (2011,1011) Patient Name Position
- (2011,1021) Patient ID Position
- (2011,1030) Density
- (2011,1031) Contrast
- (2011,1040) ID Image Position
- (2011,1050) Other Information
- (2011,1060) Modality ID
- (2011,1070) Target Printer Name
- (2011,1080) Glossy
- (2011,1090) Calibration LUT

The following attributes are reserved in the Printer SOP Class.

- (2011,0010) Konica Private Data Element
- (2011,10A0) Error Reset
- (2011,10A1) Copy Stop
- (2011,10B0) Supply Magazine Counter 1
- (2011,10B1) Supply Magazine Counter 2
- (2011,10B2) Receive Magazine Counter
- (2011,10C0) Imager Film Size ID 1
- (2011,10C1) Imager Film Size ID 2
- (2011,10D0) Imager Medium Type 1
- (2011,10D1) Imager Medium Type 2
- (2011,10E0) Film Queue Count
- (2011,10F0) Copy Queue Count

### **5 CONFIGURATION**

The following attributes are supported in the Basic Film Box SOP Class.

#### **5.1 AE Title/Presentation Address Mapping**

The following are used as environment constituting information.

- DRYPRO MODEL 771 AE name (Default: KC\_DPRO2\_P001)
- DRYPRO MODEL 771 TCP port number 100-65535 (for receiving)
- Host AE name
- Host IP address
- Host TCP port number 100-65535 (for N-EVENT-REPORT)



### **6 SUPPORT OF EXTENDED CHARACTER SETS**

For elements in which the VR is SH (short column), LO (long column), ST (short text), LT (long text), or PN (person's name), extended characters can be used by specifying an extended character repertoire in the attribute specific character group (0008,0005) for SC image IOD.

The extended character repertoire uses the following.

- ISO 2022 IR87
- ISO 2022 IR13\ISO 2022 IR87

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## Appendix.A (Characteristic state code)

### A.1 Basic Film Session SOP Class

#### A.1.1 N-CREATE

SCU can use N-CREAE to request SCP to create Basic Film Session SOP Instance.

##### <Basic Film Session SOP Class>

N-CREATE Success	DRYPRO MODEL 771 (SCP) produces a Basic Film Box SOP instance and initializes its attribute.
N-CREATE Failure	DRYPRO MODEL 771 (SCP) has not yet produced a Basic Film Box SOP instance.
N-CREATE Warning	DRYPRO MODEL 771 (SCP) was not able to produce a Basic Film Box SOP instance in the specified method.

DRYPRO MODEL 771 (SCP) returns one of the following status codes to the Host (SCU).

##### <Common status codes in the Print Management Service Class>

0000H (Success)	
0106H (Warning)	Specified Value was not supported.
0116H (Failure)	Default Value was used.
0120H (Failure)	No Value was specified.
B605H (Failure)	Density Value that cannot be supported was specified.

\* DRYPRO MODEL 771 sends A-ABORT in case of that an internal error or unknown error happened.

##### <Unique status codes>

No unique status code exists.
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#### A.1.2 N-SET

DRYPRO MODEL 771 (SCP) returns one of the following status codes to the Host (SCU).

##### <Basic Film Session SOP Class>

0000H (Success)	
0106H (Warning)	Specified Value was not supported.
0116H (Failure)	Default Value was used.
0120H (Failure)	No Value was specified.
B605H (Failure)	Density Value that cannot be supported was specified.

\* DRYPRO MODEL 771 sends A-ABORT in case of that an internal error or unknown error happened.

##### <Unique status codes>

No unique status code exists.
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### A.1.3 N-ACTION

SCU can use N-ACTION to request SCP to print one copy or more from the film box that is attributed to a Film Session.

#### <Basic Film Session SOP Class>

N-ACTION Success	DRYPRO MODEL 771 (SCP) received a film attributed to a Film Session to print.
N-ACTION Failure	DRYPRO MODEL 771 (SCP) did not print a Film Session.
N-ACTION Warning	DRYPRO MODEL 771 (SCP) did not print a Film Session in the specified method.

DRYPRO MODEL 771 (SCP) returns one of the following status codes to the Host (SCU).

#### <Common status codes in the Print Management Service Class>

No common status codes in the Print Management Service Class exists.
--

#### <Unique status codes>

0000H (Success)	A film attributed in a Film Session was received for printing.
0105H (Failure)	Operation was invalid.
0112H (Failure)	Specified Film Session did not exist.
B605H (Failure)	Print Queue was full.
C605H (Failure)	Instance UID cannot be created since Print Queue is full.
C613H (Failure)	The size of the linked image exceeds that of Image Box.

\* DRYPRO MODEL 771 sends A-ABORT in case of that an internal error or unknown error happened.

### A.1.4 N-DELETE

SCU can use N-DELETE to request SCP to delete the entire Basic Film Session SOP Instance hierarchical structure.

#### <Basic Film Session SOP Class>

N-DELETE Success	DRYPRO MODEL 771 (SCP) deleted the specified hierarchical structure of SOP Instance.
N-DELETE Failure	DRYPRO MODEL 771 (SCP) did not delete the specified hierarchical structure of SOP Instance.

DRYPRO MODEL 771 (SCP) returns one of the following status codes to the Host (SCU).

#### <Common status codes in the Print Management Service Class>

No common status codes in the Print Management Service Class exists.
--

#### <Unique status codes>

No unique status code exists.
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### **A.2 Basic Film Box SOP Class**

#### **A.2.1 N-CREATE**

SCU can use N-CREAE to request SCP to create Basic Film Box SOP Instance.

<Basic Film Box SOP Class>

N-CREATE Success	DRYPRO MODEL 771 (SCP) produces a Basic Film Box SOP instance and initializes its attribute.
N-CREATE Failure	DRYPRO MODEL 771 (SCP) has not yet produced a Basic Film Box SOP instance.
N-CREATE Warning	DRYPRO MODEL 771 (SCP) produced a Basic Film Box SOP instance in the specified method using the initial value.

DRYPRO MODEL 771 (SCP) returns one of the following status codes to the Host (SCU).

<Common status codes in the Print Management Service Class>

0000H (Success)	
0106H (Warning)	No Value was specified.
B605H (Warning)	Received a density value that exceeds the minimum or maximum density
0116H (Failure)	Default Value was used.
0120H (Failure)	Specified Value was not supported.

\* DRYPRO MODEL 771 sends A-ABORT in case of that an internal error or unknown error happened.

<Unique status codes>

No unique status code exists.
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#### **A.2.2 N-SET**

DRYPRO MODEL 771 (SCP) returns one of the following status codes to the Host (SCU).

<Common status codes in the Print Management Service Class>

0000H (Success)	
0106H (Warning)	No Value was specified.
B605H (Warning)	Received a density value that exceeds the minimum or maximum density
0116H (Failure)	Default Value was used.
0120H (Failure)	Specified Value was not supported.

\* DRYPRO MODEL 771 sends A-ABORT in case of that an internal error or unknown error happened.

<Unique status codes>

No unique status code exists.
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### **A.2.3 N-ACTION**

SCU can use N-ACTION to request SCP to print one copy or more of one film in a Film Session.

#### <Basic Film Box SOP Class>

N-ACTION Success	DRYPRO MODEL 771 (SCP) received a film attributed to a Film Session to print.
N-ACTION Warning	DRYPRO MODEL 771 (SCP) cannot print a Film Session in the specified method.
N-ACTION Failure	DRYPRO MODEL 771 (SCP) did not print a Film Session.

DRYPRO MODEL 771 (SCP) returns one of the following status codes to the Host (SCU).

#### <Common status codes in the Print Management Service Class>

No common status codes in the Print Management Service Class exists.
--

#### <Unique status codes>

0000H (Success)	A film attributed in a Film Session was received for printing.
0106H (Failure)	Specified Value was not supported.
0116H (Failure)	Default Value was used.
0120H (Failure)	No Value was specified.
C602H (Failure)	Print Queue was full.
C613H (Failure)	The size of the linked image exceeds that of Image Box.

\* DRYPRO MODEL 771 sends A-ABORT in case of that an internal error or unknown error happened.

### **A.2.4 N-DELETE**

SCU can use N-DELETE to request SCP to delete the Basic Film Session SOP Instance hierarchical structure.

#### <Basic Film Box SOP Class>

N-DELETE Success	DRYPRO MODEL 771 (SCP) deleted the specified hierarchical structure of SOP Instance.
N-DELETE Failure	DRYPRO MODEL 771 (SCP) did not delete the specified hierarchical structure of SOP Instance.

DRYPRO MODEL 771 (SCP) returns one of the following status codes to the Host (SCU).

#### <Common status codes in the Print Management Service Class>

No common status codes in the Print Management Service Class exists.
--

#### <Unique status codes>

No unique status code exists.
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### **A.3 Basic Grayscale Image Box SOP Class**

#### **A.3.1 N-SET**

SCU can use N-SET to request SCP to update a Basic Grayscale Image Box SOP Instance. SCU specifies just the Basic Grayscale Image Box SOP Instance UID that is attributed in the Film Box SOP Instance that was last produced and specifies the attribute list which is set with an attribute value.

##### **<Basic Grayscale Image Box SOP Class>**

N-SET Success	DRYPRO MODEL 771 (SCP) updated an attribute specified in the SOP Instance.
N-SET Failure	DRYPRO MODEL 771 (SCP) did not update an attribute specified in the SOP Instance.
N-SET Warning	DRYPRO MODEL 771 (SCP) was not able to operate in the specified method.

DRYPRO MODEL 771 (SCP) returns one of the following status codes to the Host (SCU).

##### **<Common status codes in the Print Management Service Class>**

0000H (Success)	
0106H (Warning)	Specified Value was not supported.
0116H (Failure)	Default Value was used.
0120H (Failure)	No Value was specified.

\* DRYPRO MODEL 771 sends A-ABORT in case of that an internal error or unknown error happened.

##### **<Unique status codes>**

No unique status code exists.
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### **A.4 Printer SOP Class**

#### **A.4.1 N-GET**

SCU can use N-GET to request SCP to get SOP Instance.

<Printer SOP Class>

N-GET Success	DRYPRO MODEL 771 (SCP) searched the SOP Instance.
N-GET Failure	DRYPRO MODEL 771 (SCP) did not search the SOP Instance.

DRYPRO MODEL 771 (SCP) returns one of the following status codes to the Host (SCU).

<Common status codes in the Print Management Service Class>

0000H (Success)	U/M	:	Printer status, printer status data
	U/U	:	Manufacturer, model name, installation serial number, software version, printer name

<Unique status codes>

No unique status code exists.
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## Appendix.B (Imager Format)

### B.1 Imager Format

STANDARD FORMAT For PROTRAIT/LANDSCAPE (1/2)

FOTMAT	11X14	14X14	14X17
STANDARD\1,1	0	0	0
STANDARD\1,2	0	0	0
STANDARD\2,1	0	0	0
STANDARD\1,3	0	0	0
STANDARD\3,1	0	0	0
STANDARD\2,2	0	0	0
STANDARD\2,3	0	0	0
STANDARD\3,2	0	0	0
STANDARD\2,4	0	0	0
STANDARD\4,2	0	0	0
STANDARD\3,3	0	0	0
STANDARD\3,4	0	0	0
STANDARD\4,3	0	0	0
STANDARD\3,5	0	0	0
STANDARD\5,3	0	0	0
STANDARD\4,4	0	0	0
STANDARD\3,6	0	0	0
STANDARD\6,3	0	0	0
STANDARD\4,5	0	0	0
STANDARD\5,4	0	0	0
STANDARD\4,6	0	0	0
STANDARD\6,4	0	0	0
STANDARD\5,5	0	0	0
STANDARD\4,7	0	0	0
STANDARD\7,4	0	0	0
STANDARD\5,6	0	0	0
STANDARD\6,5	0	0	0
STANDARD\4,8	0	0	0
STANDARD\8,4	0	0	0
STANDARD\5,7	0	0	0
STANDARD\7,5	0	0	0
STANDARD\6,6	0	0	0
STANDARD\5,8	0	0	0
STANDARD\8,5	0	0	0
STANDARD\6,7	0	0	0
STANDARD\7,6	0	0	0
STANDARD\6,8	0	0	0
STANDARD\8,6	0	0	0
STANDARD\7,7	0	0	0
STANDARD\6,9	0	0	0
STANDARD\9,6	0	0	0
STANDARD\7,8	0	0	0
STANDARD\8,7	0	0	0



## DRYPRO MODEL 771

### STANDARD FORMAT For PROTRAIT/LANDSCAPE (2/2)

FOTMAT	11X14	14X14	14X17
STANDARD\6,10	○	○	○
STANDARD\10,6	○	○	○
STANDARD\7,9	○	○	○
STANDARD\9,7	○	○	○
STANDARD\8,8	○	○	○

\* Supports the above formats without regard to the size and orientation of the film.

### STANDARD FORMAT For MIX

FOTMAT	11X14	14X14	14X17
ROW\3,2	○	○	○
ROW\2,3	○	○	○
ROW\3,3,2	○	○	○
ROW\2,3,3	○	○	○
ROW\4,4,2	○	○	○
ROW\2,4,4	○	○	○
ROW\3,3,3,2	○	○	○
ROW\2,3,3,3	○	○	○
ROW\3,1,	○	○	○
ROW\1,3	○	○	○
ROW\2,2,1	○	○	○
ROW\1,2,2	○	○	○
ROW\3,3,1	○	○	○
ROW\1,3,3	○	○	○
ROW\3,3,3,1	○	○	○
ROW\1,3,3,3	○	○	○

\* Supports the above formats without regard to the size and orientation of the film.

**B.2 Other restriction on the image data**

- Printable Pixel Matrix (PP)

Stamp character direction: Same as film direction

Film Size	Film Orientation	Columns	Row
14 X 17	Portrait	4344 (4496)	5196 (5412)
	Landscape	5312 (5412)	4230 (4496)
14 X 14	Portrait	4344 (4496)	4230 (4446)
	Landscape		
11 X 14	Portrait	3390 (3492)	4230 (4496)
	Landscape	4344 (4496)	3276 (3492)

Stamp character direction: Opposite to film direction

Film Size	Film Orientation	Columns	Row
14 X 17	Portrait	4306 (4496)	5248 (5412)
	Landscape	5260 (5412)	4268 (4496)
14 X 14	Portrait	4306 (4496)	4281 (4446)
	Landscape		
11 X 14	Portrait	3340 (3492)	4268 (4496)
	Landscape	4306 (4496)	3327 (3492)

- The parenthesized value is in case of the CR mode
- Maximum Input Image size: 26M Pixels

For the specified input image size for 1 on 1 format in fixed pixel pitch 78.6µm, use the values in the table shown above.

- Maximum Input image size for each film size (When the size is not reduced), orientation and format can be calculated by following formula.

Maximum Input size in Column :  $(PP - 16 * (Nh - 1)) / Nh$

Maximum Input size in Row :  $(PP - 16 * (Nv - 1)) / Nv$

(PP = Printable Pixel Matrix, Nh = Number of frames in Column, Nv = Number of frames in Row)

ex.: In the case of Film Size 14 x 17, 3 x 4 frames (12 on one format) and Portrait;

Maximum Input size in Column :  $(4344 - 16 * (3-1)) / 3 = 1437$

Maximum Input size in Row :  $(5196 - 16 * (4-1)) / 4 = 1287$

- Maximum Input image size for each film size (When the size is reduced), orientation and format can be calculated by following formula.

Maximum Input size in Column :  $(PP - 16 * (Nh - 1)) / Nh / 0.8$

Maximum Input size in Row :  $(PP - 16 * (Nv - 1)) / Nv / 0.8$

(PP = Printable Pixel Matrix, Nh = Number of frames in Column, Nv = Number of frames in Row)

ex.: In the case of Film Size 14 x 17, 3 x 4 frames (12 on one format) and Portrait;

Maximum Input size in Column :  $(4344 - 16 * (3-1)) / 3 / 0.8 = 1796$

Maximum Input size in Row :  $(5196 - 16 * (4-1)) / 4 / 0.8 = 1608$

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### Appendix.C (Status Information)

#### C.1 Status Information

##### Imager Status Data

NO	Value	Description
1	COVER OPEN	Tray or Door in Printer or Cover in Processor has been opened.
2	ELEC DOWN	Printer is down due to the electrical hardware trouble.
3	ELEC SW ERROR	Printer is down by the software error.
4	EMPTY 11 x 14	11 x 14 Film EMPTY
5	EMPTY 11 x 14 CLR	11 x 14 Clear Film EMPTY
6	EMPTY 11 x 14 BLUE	11 x 14 Blue Film EMPTY
7	EMPTY 11 x 14DR C	11 x 14 DR Clear Film EMPTY
8	EMPTY 11 x 14DR B	11 x 14 DR Blue Film EMPTY
9	EMPTY 14 x 14	14 x 14 Film EMPTY
10	EMPTY 14 x 14 CLR	14 x 14 Clear Film EMPTY
11	EMPTY 14 x 14 BLUE	14 x 14 Blue Film EMPTY
12	EMPTY 14 x 14DR C	14 x 14 DR Clear Film EMPTY
13	EMPTY 14 x 14DR B	14 x 14 DR Blue Film EMPTY
14	EMPTY 14 x 17	14 x 17 Film EMPTY
15	EMPTY 14 x 17 CLR	14 x 17 Clear Film EMPTY
16	EMPTY 14 x 17 BLUE	14 x 17 Blue Film EMPTY
17	EMPTY 14 x 17DR C	14 x 17 DR Clear Film EMPTY
18	EMPTY 14 x 17DR B	14 x 17 DR Blue Film EMPTY
19	EXPOSURE FAILURE	Unknown problem in the Optical unit
20	FILM JAM	A film jam occurred in the Printer.
21	FILM TRANSP ERR	Error in film transportation
22	CHECK PRINTER	Printer is not ready.
23	PRINTER INIT	The printer is not prepared due to normal warm-up status, etc.
24	PRINTER DOWN	The printer is not operating due to an uncertain factor.
25	UNKNOWN	Unknown trouble

\* Shaded items are extended error code.



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